

CLAIMS HISTORY:

CLAIMS:

1. (Cancelled) I claim an invention which is specialized for use in a low cost, low security environment with both unattended and attended operation with means for specialized post-crime, suspect identification using digital, audio-video security recording which is comprised of the elements of:

a camera body,

a closed loop servo-motor controlled passively auto-focused camera lens optimized for motion video use, furthermore with means for use as a gain-box (G-box),

a closed loop servo-motor controlled passively auto-focused camera lens optimized for still photographic use, furthermore with means for use as a gain-box (G-box),

a transmissive motion sensor,

a micro-processor with means for output compressed digital data stream final assembly, furthermore with means for very rapid closed

loop servo-motor control processing of the H-boxes and the G-boxes,
furthermore with means for suspect motion computer modeling,

peripheral input/output (I/O) bus and timing circuitry,

micro-processor input/output I/O peripheral chips,

a passively focused Moving Picture Expert's Group X like (MPEG X-like) optimized both infrared and visible light receptive charge coupled device (MPEG-like CCD) which is used with means as a hold-box (H-box) signal generator for closed loop servo motor control algorithms executed in the micro-processor used in lens servo-motor control,

a passively focused Joint Photographer's Expert's Group like (JPEG-like) optimized visible light receptive charge coupled device (JPEG-like CCD) which is used with means as a Hold-box (H-box) signal generator for closed loop servo motor control algorithms executed in the micro-processor used in lens servo-motor control,

a high rate analog to digital converter (ADC) with means for converting the MPEG X-like charge coupled device (CCD) output analog audio and video signals to digital with means for micro-processor bus input into the dedicated digital compression circuitry, furthermore with means to act as a hold-box (H-box) for closed loop servo-motor MPEG X-like lens control,

a low rate analog to digital converter (ADC) with means for converting the JPEG X-like charge coupled device (CCD) output analog video signals to digital with means for micro-processor bus input into the dedicated digital compression circuitry, furthermore with means to act as a hold-box (H-box) for closed loop servo-motor JPEG X-like lens control,

a very low rate analog to digital converter (ADC) with means for converting the two channels of analog audio from a line amplified micro-phone into MPEG X-like digitized audio with means for micro-processor bus input into the dedicated digital compression circuitry,

a MPEG X like specialized digital compression circuit,

a JPEG X like specialized digital compression circuit,

dynamic random access memory (DRAM) for temporary data store with means for holding large 6 mega pixel JPEG X-like frames,

electrically erasable programmable read only memory (EEPROM) for permanent computer program store,

static RAM (SRAM) for small amounts of fast micro-processor program variables storage,

a first in first out buffer (FIFO),

a removable permanent memory storage device for digital data
with first example means of a digital video tape cassette,

a power supply,

which elements are electronically and mechanically combined together
into a specialized, hybrid simultaneously recorded JPEG like and MPEG
X like digital audio-video camera, which furthermore simultaneously
produces a high data rate audio-video stream of MPEG X like
compressed digital video signals, and also at the same time a very
low rate much higher resolution still photograph stream of JPEG X
like still suspect photographs with first application means for post-
crime suspect identification and capture, and with second application
means for professional filming for commercial entertainment movies
and shows.

2. (Cancelled) The invention of claim 1 whereby the passively,
auto-focused camera lens may be of a unit count of two with one
closed loop servo-motor controlled lens dedicated to a specialized
MPEG X like charge coupled device (CCD) and one closed loop servo-
motor controlled lens dedicated to a specialized JPEG X like charge
coupled device (CCD).

3. (Cancelled) The invention of claim 1 whereby the transmissive
motion sensors are example means of infrared diode (IR) emitters

arranged in a focal plane array, furthermore, the infrared diodes are aimed outwards at all directions.

4. (Cancelled) The invention of claim 1 whereby the transmissive motion sensors are example means of infrared (IR) heat diode emitters arranged in a focal plane array aimed at different outwards directions, furthermore the reflected off a moving target infrared heat hot spot is received by a combined infrared and visible light MPEG like CCD sensitive to reflected heat images.

5. (Cancelled) The invention of claim 1 whereby the micro-processor with separate elements of an input and output (I/O) bus, furthermore with separate elements of interrupt and timing circuitry keeps a means for suspect computer motion modeling by software algorithm using the input data from the combined infrared and visible light MPEG like CCD of both still and moving heat image CCD coordinates of (x, y, image heat intensity, time, optional z-axis range using a machine vision algorithm).

6. (Cancelled) The invention of claim 1 whereby the closed loop servo-motor controlled passively auto-focused camera lens optimized for wide-angle motion video use, receives from the micro-processor's computer motion model the motor controls for a single suspect of interest and does micro-processor bus latch to discrete analog control circuitry lens motion.

7. (Cancelled) The invention of claim 1 whereby the closed loop servo-motor controlled passively auto-focused camera lens optimized for wide-angle still photographic use, receives from the micro-processor's computer motion model the motor controls for a single suspect of interest and does micro-processor bus latch to discrete analog control circuitry lens motion.

8. (Cancelled) The invention of claim 1 whereby the analog to digital converter (ADC) converts all CCD output from analog to digital with means for processing groups of video rows (macro-blocks) of a single movie frame conversion, furthermore with means for processing groups of video rows of a single still frame, furthermore with means processing audio streams of data.

9. (Cancelled) The invention of claim 1 whereby the MPEG X like digital compression circuitry has means for processing rows of video (macro-blocks) from a single movie frame, furthermore it has means for color model conversion, furthermore it has means for a digital compression algorithm which can distinguish 'visually unimportant data' for selective drop out in lossy data compression, furthermore it has means for adding error detection and correction parity bits, furthermore it has means for using the micro-processor bus to deposit the groups of video rows (macro-blocks) into DRAM memory in an eventual complete movie frame which is given the MPEG X like 'presentation time stamp,' furthermore the MPEG X like chip inputs digital sound from two audio analog to digital converters (ADC's) and digitally compresses the two channels using the MPEG X

like audio digital compression standard for audio stream output with MPEG X like 'MPEG I presentation time stamps (PTS).'

10. (Cancelled) The invention of claim 1 whereby the JPEG X like digital compression circuitry has means for processing rows of video from a single still picture frame, furthermore it has means for color model conversion, furthermore it has means for a digital compression algorithm which can distinguish 'visually unimportant data' for selective drop out in lossy data compression, furthermore it has means for adding error detection and correction parity bits, furthermore it has means for using the micro-processor bus to deposit the groups of still picture rows into DRAM memory in an eventual complete still picture frame which has the MPEG X like 'presentation time stamp.'

11. (Cancelled) The invention of claim 1 whereby the dynamic random access memory (DRAM) is used for temporary data store of actions with micro-processor means for collecting from both the MPEG X like and JPEG X like digital compression chips the groups of rows of video for a single frame until a completed either movie MPEG X like frame or still picture JPEG X like frame is assembled, furthermore with means collecting a MPEG X like digitally compressed audio stream, furthermore with means for MPEG X like control stream assembling the various streams into a hybrid output data stream called the new with this invention the proposed MPEG IV Level S1/E1 which furthermore uses an efficient frame re-ordering means.

12. (Cancelled) The invention of claim 1 whereby the electrically erasable programmable read only memory (EEPROM) has means for permanent computer program store.

13. (Cancelled) The invention of claim 1 whereby the first in first out buffer (FIFO) is used to connect an input and output (I/O) bus device to computer memory.

14. (Cancelled) The invention of claim 1 whereby the output audio and video stream recorded is a new with this invention proposed MPEG X like level called the new proposed MPEG IV level S1/E1 format for security level 1 1st means, furthermore for entertainment level 1 2nd means, furthermore using hybrid MPEG X like digitally compressed audio-video along with a much lower rate stream of still JPEG like digitally compressed, higher resolution, photos.

15. (Cancelled) The invention of claim 13 whereby the new proposed MPEG X level S1/E1 for security level 1 1st means, furthermore for entertainment level 1 2nd means, furthermore holds digital data with example means being GPS satellite navigation data, GPS time accurate to 1 micro-second at the recording, GPS latitude, GPS longitude, GPS altitude, delta GPS position, attitude data from an inertial reference unit (stick plane data), video channel data, pilot text notes, terrain map data, interactive television guide data in a

"silhouette-like" cryptography technique in potentially every frame using static background areas to store data.

16. (Cancelled) The invention of claim 1 whereby the removable permanent memory device is a digital video tape cassette.

17. (Canceled) The invention of claim 1 whereby the removable permanent memory device is remotely connected to the video camera through a video local area network (video-LAN) with a first example means being a broadband cable network.

18. (Cancelled) The invention of claim 1 whereby the removable permanent memory device is remotely connected to the video camera through a video local area network (video-LAN) with a second example means being a fiber optic network.

19. (Cancelled) The invention of claim 1 whereby the power supply is a nickel cadmium ("ni cad") battery re-charged by a separate power line in the video local area network (V-LAN).

20. (Cancelled) I claim an invention which is specialized for use in a medium cost, medium security environment with both unattended and attended operation with means to monitor only several moving suspects where specialized post-crime, suspect identification is desired using digital, audio-video security recording which is comprised of the elements of:

a camera body,

a closed loop servo-motor controlled passively auto-focused camera lens optimized for motion video use, furthermore with means for use as a gain-box (G-box),

a closed loop servo-motor controlled passively auto-focused camera lens optimized for still photographic use, furthermore with means for use as a gain-box (G-box),

a focal plane array based transmissive motion sensor which aims out in different directions,

a single receiver using a dedicated both infrared and visible light charge coupled device (focal plane CCD),

a micro-processor with means for output compressed digital data stream final assembly, furthermore with means for very rapid closed

loop servo-motor control processing of the H-boxes and the G-boxes,
furthermore with means for suspect motion computer modeling,

peripheral input and output (I/O) bus and timing circuitry,

micro-processor input/output I/O peripheral chips,

a passively focused Moving Picture Expert's Group X like (MPEG X-like) optimized both infrared and visible light receptive charge coupled device (MPEG-like CCD) which is used with means as a hold-box (H-box) signal generator for closed loop servo motor control algorithms executed in the micro-processor used in lens servo-motor control,

micro-processor input/output I/O peripheral chips,

a passively focused Moving Picture Expert's Group X like (MPEG X-like) optimized both infrared and visible light receptive charge coupled device (MPEG-like CCD) which is used with means as a hold-box (H-box) signal generator for closed loop servo motor control algorithms executed in the micro-processor used in lens servo-motor control,

a passively focused Joint Photographer's Expert's Group like (JPEG-like) optimized visible light receptive charge coupled device (JPEG CCD) which is used with means as a Hold-box (H-box) signal

generator for closed loop servo motor control algorithms executed
in the micro-processor used in lens servo-motor control,

analog to digital converters (ADC's),

a simultaneous-mode MPEG X/JPEG X like digital compression
circuit,

dynamic random access memory (DRAM) for temporary data store
with means for holding large 6 mega pixel JPEG X-like frames,

electrically erasable programmable read only memory (EEPROM) for
permanent computer program store,

static RAM (SRAM) for small amounts of fast micro-processor
program variables storage,

a first in first out buffer (FIFO),

a removable permanent memory device for digital data with first
example means of a digital video tape cassette,

a power supply,

which elements are electronically and mechanically combined together
into a specialized, hybrid simultaneously recorded JPEG like and MPEG
X like digital audio-video camera, which furthermore simultaneously

produces a high data rate audio-video stream of MPEG X like compressed digital video signals, and also at the same time a very low rate much higher resolution still photograph stream of JPEG X like still suspect photographs with first application means for post-crime suspect identification and capture, and with second application means for professional filming for commercial entertainment movies and shows.

21. (Cancelled) The invention of claim 20 whereby the passively, auto-focused camera lens may be of a unit count of two with one closed loop servo-motor controlled lens dedicated to a specialized MPEG X like charge coupled device (CCD) and one closed loop servo-motor controlled lens dedicated to a specialized JPEG X like charge coupled device (CCD).

22. (Cancelled) The invention of claim 20 whereby the focal plane array based motion sensor has infrared (IR) heat diode emitters aimed outwardly at all different directions with a redundant infrared (IR) charge coupled device integrated with a visible light charge coupled device (focal plane CCD) to pick up both reflected heat and visible light image of a moving suspect.

23. (Cancelled) The invention of claim 22 whereby the micro-processor/micro-controller with input and output (I/O) bus and timing circuitry reads the combined infrared light and visible light charge coupled device's (focal plane CCD's)

measured (x, y, image heat intensity, time) to maintain a computer motion model of all still or moving heat images.

24. (Cancelled) The invention of claim 23 whereby the passively focused, infrared and visible light, charge coupled device (focal plane CCD) with lens feed-back circuitry, uses the stereo vision or 2-video channels to create a 3-dimensional computer image modeling to measure a standard foot ruled tape marking placed in the camera view at a user micro-processor/micro-controller programmed fixed distance at camera center with means to compute a three dimensional image 3-D computer model from which to micro-processor/micro-controller generate a computer 2-D slice across the z-axis gives the z-axis range to suspect estimates which it gives to the micro-processor/micro-controller to also maintain in the computer motion model.

25. (Cancelled) The invention of claim 20 whereby the closed loop servo-motors for both the MPEG-X like lens and the JPEG-X like lens are fed by the micro-processor/micro-controller into their gain-boxes (G-boxes) the desired motor value to move the focal point of the lens with a rapid continuous course and then fine feed-back path which is called auto-focus.

26. (Cancelled) The invention of claim 20 whereby the analog to digital converter (ADC) converts any analog output from

first means of the MPEG-X like CCD, and second means of the JPEG-X like CCD, and third means of the line amplified analog audio signal from two micro-phones, from analog to digital.

27. (Cancelled) The invention of claim 20 whereby a simultaneous-mode MPEG X/JPEG X LIKE digital compression circuit can simultaneously compress both separate streams of high rate and medium resolution per frame MPEG X like and low rate and high resolution per frame JPEG X like digital data.

28. (Cancelled) The invention of claim 20 whereby the dynamic random access memory (DRAM) is used for temporary data store of large digital video data for buffered storage accessed by micro-processor/micro-controller means for collecting CCD to ADC digitized output of first example means of a single uncompressed digital JPEG still video frame, and second example means of a single uncompressed digital MPEG X LIKE moving video frame, and with micro-processor/micro-controller means for sending arbitrary rows of a single frame at once to the simultaneous-mode MPEG X/JPEG X LIKE compression circuit, and with micro-processor/micro-controller means for storing and assembling in DRAM both the MPEG X like and JPEG X like compressed digital data into an output data stream.

29. (Cancelled) The invention of claim 20 whereby the electrically erasable programmable read only memory (EEPROM) has means for permanent computer program store.

30. (Cancelled) The invention of claim 20 whereby the first in first out buffer (FIFO) is used to connect an input/output (I/O) bus device to computer memory.

31. (Cancelled) The invention of claim 20 whereby the output data stream recorded is a new MPEG X LIKE extension called proposed MPEG X LIKE level S1/E1 for a first application means of security level 1, furthermore, as a second application means for entertainment level 1, furthermore, with means for hybrid storage of the proposed MPEG X LIKE level S1/E1 compressed digital format which is comprised of moving MPEG X like audio-video as well as higher resolution still JPEG X like digital still photographs.

32. (Cancelled) The invention of claim 31 whereby the proposed MPEG X LIKE level S1/E1 data stream holds extra inserted digital data in a "silhouette-like" cryptography technique potentially in every frame for frame stamping using static background areas of the video with first example means being GPS date, second example means being GPS time to within 1 micro-second at the recording, third example means being GPS satellite navigation position stamps (point data), fourth example means being GPS satellite navigation delta position stamps (point movement data), fifth example means being inertial reference unit angle data ('stick airplane data'), sixth example

means being inertial reference unit translation data ('velocity data'), seventh example means being video camera channel.

33. (Cancelled) The invention of claim 20 whereby the removable permanent memory device is a digital video tape cassette.

34. (Cancelled) The invention of claim 20 whereby the removable permanent recording device is remotely connected through a video local area network with an example means being a broadband cable network.

35. (Cancelled) The invention of claim 20 whereby the removable permanent recording device is remotely connected through a video local area network (V-LAN) with an example means being a fiber optic network.

36. (Cancelled) The invention of claim 30 whereby the power supply is attached to the video local area network and is delivered over power pins.

37. (Cancelled) I claim an invention which is specialized for use in a low cost, low security environment with both unattended and attended operation with means to monitor at most several moving suspects where means for specialized post-crime, suspect identification is desired using means of digital, audio-video security recording which is comprised of the elements of:

a camera body,

a closed loop servo-motor controlled passively auto-focused camera lens,

a transmissive motion sensor which aims out in at least one direction,

a passively focused both infrared and visible light receptive charge coupled device (CCD) which is used with means as a signal generator for closed loop servo motor control algorithms used in lens servo-motor control,

an analog to digital converter,

a micro-processor/micro-controller with means for output compressed digital data stream final assembly, furthermore with means for very rapid multi-cycle closed loop servo-motor control processing for the

lens assembly, furthermore with means for suspect motion computer modeling,

peripheral input and output (I/O) bus and timing circuitry,

micro-processor input/output I/O peripheral chips,

analog to digital converters (ADC's),

a digital compression circuit,

dynamic random access memory (DRAM) for temporary data store with means for holding large 6 mega pixel JPEG X-like frames,,

electrically erasable programmable read only memory (EEPROM) for permanent computer program store,

static RAM (SRAM) for small amounts of fast micro-processor program variables storage,

a removable permanent memory device for digital data with first example means of a digital video tape cassette, and second example means being a memory card,

a power supply,

which elements are electronically and mechanically combined together into a specialized, hybrid simultaneously recorded JPEG X like and MPEG X like digital audio-video camera, which furthermore simultaneously produces a high data rate audio-video stream of MPEG X like compressed digital video signals, and also at the same time a very low rate much higher resolution still photograph stream of JPEG X like still suspect photographs with first application means for post-crime suspect identification and capture, and with second application means for professional filming for commercial entertainment movies and shows.

38. (Cancelled) The invention of claim 37 whereby the passively, auto-focused camera lens may be of a unit count of two with one closed loop servo-motor controlled lens dedicated to a specialized MPEG X like charge coupled device (CCD) and a second closed loop servo-motor controlled lens dedicated to a specialized JPEG X like charge coupled device (CCD).

39. (Cancelled) The invention of claim 37 whereby the motion sensor emitter has a infrared (IR) heat diode emitter aimed outwardly in at least one direction.

40. (Cancelled) The invention of claim 39 whereby the micro-processor/micro-controller with input and output (I/O) bus and timing circuitry reads the combined infrared light and visible light charge coupled device's measured (x, y, image heat

intensity, time) to maintain a computer motion model of all still or moving heat images.

41. (Cancelled) The invention of claim 39 whereby the closed loop servo-motors for both the MPEG-X like lens and the JPEG-X like lens are fed by the micro-processor/micro-controller into their gain-boxes (G-boxes) the desired motor value to move the focal point of the lens with a rapid continuous course and then fine feed-back path which is called auto-focus.

42. (Cancelled) The invention of claim 39 whereby the analog to digital converter (ADC) converts any analog output from first means of the MPEG-X like CCD, and second means of the JPEG-X like CCD, and third means of the line amplified analog audio signal from two micro-phones, from analog to digital for micro-processor/micro-controller bus reading and eventual digitizing.

43. (Cancelled) The invention of claim 39 whereby a simultaneous-mode MPEG X/JPEG X like digital compression circuit can simultaneously compress both separate streams of high rate and medium resolution per frame MPEG X LIKE and low rate and high resolution per frame JPEG X LIKE digital data as well as very low rate MPEG X LIKE two-channel audio data.

44. (Cancelled) The invention of claim 39 whereby the dynamic random access memory (DRAM) is used for temporary data store of large digital video data for buffered storage accessed by micro-

processor/micro-controller means for collecting the CCD joined with ADC digitized output of first example means of completed JPEG X like standard rows of a single uncompressed digital JPEG still video frame, and second example means of completed rows of MPEG X like standard macro-block rows of a single uncompressed digital MPEG X LIKE moving video frame, and with micro-processor/micro-controller means for sending arbitrary numbers of standard rows of a single frame at once to the simultaneous-mode MPEG X/JPEG X LIKE compression circuit, furthermore with micro-processor/micro-controller means for storing and assembling in DRAM a MPEG X like control stream along with both the MPEG X like and JPEG X like compressed digital data into an output data stream.

45. (Cancelled) The invention of claim 39 whereby the electrically erasable programmable read only memory (EEPROM) has means for permanent computer program store.

46. (Cancelled) The invention of claim 39 whereby the output data stream recorded is a new MPEG X LIKE extension called proposed MPEG X LIKE level S1/E1 for a first application means of security level 1, furthermore, as a second application means for entertainment level 1, furthermore, with means for hybrid storage of the proposed MPEG X like level S1/E1 compressed digital format which is comprised of a MPEG X like control stream, furthermore high rate and medium resolution moving MPEG X like audio-video with MPEG X like MPEG I presentation time

stamps (PTS), furthermore low rate and higher resolution still JPEG X like digital still photographs with MPEG X like MPEG I presentation time stamps (PTS), furthermore additional data streams of interest with MPEG X like MPEG I presentation time stamps (PTS).

48. (Cancelled) The invention of claim 47 whereby the proposed MPEG X level S1/E1 data stream holds extra inserted digital data in a 'silhouette-like' cryptography technique potentially in every frame using static background areas of the video with 1st example means being GPS satellite navigation date stamps, very accurate time stamps, and position stamps.

49. (Cancelled) The invention of claim 37 whereby the removable permanent memory device is a digital video tape cassette.

50. (Cancelled) The invention of claim 37 whereby the removable permanent recording device is remotely connected through a video local area network with an example means being a broadband cable network.

51. (Cancelled) The invention of claim 37 whereby the removable permanent recording device is remotely connected through a video local area network (V-LAN) with an example means being a fiber optic network.

52. (Cancelled) The invention of claim 37 whereby the power supply is attached to the video local area network and is delivered over power pins.

53. (Cancelled) I claim an invention which is specialized for use in a low cost, low security environment which emphasizes use of a single, mixed circuit, main integrated computing and sensing integrated circuit (CMOS vision chip) used in a chip-set architecture with both unattended and attended operation with means for specialized post-crime, suspect identification using digital, audio-video remote local area network connected security data recording to removable digital video tape which is comprised of the elements of:

a camera body,

a closed loop servo motor controlled passively auto focused camera lens optimized for motion video use, furthermore with means for use as a gain-box (G-box),

a closed loop servo-motor controlled passively auto-focused camera lens optimized for still photographic use, furthermore with means for use as a gain-box (G-box),

a transmissive motion sensor,

an integrated computing and sensing device (CMOS vision chip) with means for output compressed digital data stream final assembly, furthermore with means for very rapid closed loop servo-motor control processing of the H-boxes and the G-boxes,

furthermore with means for suspect motion computer modeling, a passively focused Fast Wavelet transform like (FWT-like) optimized both infrared and visible light receptive CMOS vision chip circuitry which is also used with means as a hold-box (H-box) signal generator for closed loop servo motor control algorithms executed in the micro-processor used in lens servo-motor control, furthermore with means for a passively focused Joint Photographer's Expert's Group 2000 (fast wavelet) like (JPEG-2000-like) optimized visible light receptive CMOS vision chip which is also used with means as a hold-box (H-box) signal generator for closed loop servo motor control algorithms executed in the micro-processor used in lens servo-motor control, furthermore with on-chip Fast Wavelet transform like (FWT-like) digital compression circuitry, furthermore with on-chip JPEG 2000-like digital compression circuitry, furthermore with on-chip mixed circuit low rate analog audio input and amplification, analog to digital conversion (ADC) of the low rate audio, and on-chip Advanced Audio CODEC(R)-like (AAC (R)-like) digital audio compression (FWT-like audio layer Y).

peripheral input/output (I/O) bus and timing circuitry,

micro-processor input/output I/O peripheral chips,

dynamic random access memory (DRAM) for temporary data store in frame buffers with means for holding large 6 mega pixel JPEG X-like frames,

electrically erasable programmable read only memory (EEPROM) for permanent computer program store,

static RAM (SRAM) for small amounts of fast micro-processor program variables storage,

a first in first out buffer (FIFO),

a reversed from cable use bandwidth direction, built-in cable modem network interface circuitry (NIC) in a multiple chip-set architecture,

a video local area network (video-LAN) also known as a broadband local area network (broadband LAN) using coaxial cable connections.

a removable permanent memory storage device for digital data with first example means of a digital video (e.g. mini-DV (R) brand) tape cassette,

a power supply,

which elements are electronically and mechanically combined together into a specialized, hybrid simultaneously recorded JPEG X like and MPEG X like digital audio-video camera, which furthermore simultaneously produces a high data rate audio-video stream of MPEG X like compressed digital video signals, and also at the same time a time stamp correlated (presentation time-stamps (PTS)) very low rate

much higher resolution still photograph stream of JPEG Y like still suspect photographs with first application means for post-crime suspect identification and capture, and with second application means for professional filming for commercial entertainment movies and shows.

54. (Cancelled) The invention of claim 53 whereby the passively, auto-focused camera lens may be of a unit count of two with one closed loop servo-motor controlled lens dedicated to a specialized MPEG X like CMOS vision chip area (MPEG X CMOS VSN) and one closed loop servo-motor controlled lens dedicated to a specialized JPEG X like CMOS vision chip area (JPEG X LIKE CMOS VSN).

55. (Cancelled) The invention of claim 53 whereby the transmissive motion sensors are example means of infrared diode (IR) emitters arranged in a focal plane geometry; furthermore, the infrared diodes are aimed outwards at all directions.

56. (Cancelled) The invention of claim 53 whereby the transmissive motion sensors are example means of infrared (IR) heat diode emitters arranged in a focal plane geometry aimed at different outwards directions, furthermore the reflected off a moving target infrared heat hot spot is received by a combined infrared and visible light said integrated computing and sensing device which is sensitive to both visible light and reflected heat images.

57. (Cancelled) The invention of claim 53 whereby said integrated computing and sensing device with separate elements of an input and output (I/O) bus, furthermore with separate elements of interrupt and timing circuitry which keeps a means for suspect computer motion modeling by software algorithm called a designated moving target motion model using the input data from the combined infrared and visible light digitized images of both still and moving heat image initial two dimensional coordinates of (x, y, image heat intensity, time, optional z-axis range using a machine vision algorithm).

58 (Cancelled) The invention of claim 53 whereby the closed loop servo-motor controlled passively auto-focused camera lens optimized for wide-angle motion video use, receives from the integrated computing and sensing device the computer motion model's computed motor controls for a single designated moving target of interest and does micro-processor bus latch to discrete analog control circuitry lens motion.

59. (Cancelled) The invention of claim 53 whereby the closed loop servo-motor controlled passively auto-focused camera lens optimized for wide-angle still photographic use, receives from the micro-processor's computer motion model the motor controls for a single suspect of interest and does integrated computing and sensing device bus latch to discrete analog control circuitry lens motion using the H-box and G-box available closed loop servo-motor feed-back circuitry.

60. (Cancelled) The invention of claim 53 whereby the integrated computing and sensing device, processes fully uncompressed digital video signals with means for processing groups of video rows (macro-blocks) of a single movie frame conversion, furthermore with means for processing groups of video rows of a single still frame, furthermore with means for mixed-circuit processing of digitized audio streams of data.

61. (Cancelled) The invention of claim 53 whereby the MPEG X like digital compression circuitry within the integrated computing and sensing device has means for processing rows of video (macro-block-like) from a single movie frame, furthermore it has means for color model conversion, furthermore it has means for a digital compression algorithm which can distinguish 'visually unimportant data' for selective drop out in lossy data compression, furthermore it has means for adding error detection and correction parity bits as in Reed-Solomon (RS) forward error detection and correction parity bits, furthermore it has means for using the micro-processor bus to deposit the groups of video rows (macro-blocks) into off-chip, DRAM memory in frame buffers in an eventual complete movie frame which is given the MPEG X like 'MPEG I presentation time stamps (PTS)' which were later called 'decode time stamps (DTS's)' furthermore the MPEG X like circuitry inputs digital sound from two audio analog to digital converters (ADC's) and digitally compresses the two channels using the MPEG X like audio digital compression standard for audio stream output with MPEG X like 'MPEG I

presentation time stamps (PTS)' which were later called 'decode time stamps (DTS's).'

62. (Cancelled) The invention of claim 53 whereby the JPEG X like digital compression circuitry on the integrated computing and sensing device has means for processing rows of video from a single still picture frame, furthermore it has means for color model conversion, furthermore it has means for a digital compression algorithm which can distinguish 'visually unimportant data' for selective drop out in lossy data compression, furthermore it has means for adding error detection and correction parity bits, furthermore it has means for using the micro-processor bus to deposit the groups of still picture rows into DRAM memory in an eventual complete still picture frame which has the MPEG X like 'MPEG I presentation time stamps (PTS)' or 'decode time-stamps (DTS's).'

63. (Cancelled) The invention of claim 53 whereby the dynamic random access memory (DRAM) is used for temporary data store of actions with integrated computing and sensing device means for collecting from both the MPEG X like and JPEG X like digital compression chips the groups of rows of video for a single frame until a completed either movie MPEG X like frame or still picture JPEG X like frame is assembled, furthermore with means for collecting a MPEG X like digitally compressed audio stream, furthermore with means for MPEG X like control stream assembling the various streams into a hybrid output data stream called the new

with this invention the proposed MPEG IV Level S1/E1 standing for specialized security and entertainment options and which furthermore uses an efficient frame re-ordering means.

64. (Cancelled) The invention of claim 53 whereby the electrically erasable programmable read only memory (EEPROM) has means for permanent computer program store.

65. (Cancelled) The invention of claim 53 whereby the first in first out buffer (FIFO) is used to connect an input and output (I/O) bus device to computer memory.

66. (Cancelled) The invention of claim 53 whereby the output audio and video stream recorded is a new with this invention proposed MPEG X like level called the new proposed MPEG IV level S1/E1 format for security level 1 1st means, furthermore for entertainment level 1 2nd means, furthermore using hybrid MPEG X like digitally compressed audio-video along with a much lower rate stream of still JPEG like digitally compressed, higher resolution, photos.

67. (Cancelled) The invention of claim 65 whereby the new proposed MPEG X level S1/E1 standing for security and entertainment level 1 1st means, furthermore for entertainment level 1, 2nd means, furthermore holds digital data with example means being GPS satellite navigation date, GPS time accurate to several hundred micro-seconds at the moment of recording, GPS

latitude, GPS longitude, GPS altitude, delta GPS position, attitude data from an inertial reference unit (stick plane data), video channel data, pilot text notes, terrain map data, interactive television guide data in a "silhouette-like" cryptography technique in potentially every frame using static background areas to store data.

68. (Cancelled) The invention of claim 53 whereby the removable permanent memory device is a digital video (e.g. DV (R) brand) tape cassette.

69. (Cancelled) The invention of claim 53 whereby the removable permanent memory storage device is remotely connected to the video camera through a video local area network (video-LAN) with a built-in network interface circuitry (NIC) with the first example means being a broadband cable network using the built-in internal cable MODEM functions.

70. (Cancelled) The invention of claim 69 whereby the built-in chip set cable MODEM function uses a combination of IBM's patented Data Encryption Standard (DES) secret key one-way only encryption (of already digitally compressed data), Reed Solomon (RS) forward error detection and correction parity coding, and 'Turbo-coding' convolutional coding for modulation.

71. (Cancelled) The invention of claim 53 whereby the removable permanent memory device is remotely connected to the video camera

through a video local area network (video-LAN) with a second example means being a fiber optic network.

72. (Cancelled) The invention of claim 53 whereby the power supply is a nickel metal hydride ("NiMH") battery re-charged by a separate power line in the video local area network (V-LAN).

PLEASE REPLACE OLD CLAIMS NUMBERED 1 - 72 WITH NEW CLAIMS NUMBERED 73 - 100:

73. (New) The present applicant claims a new utility systems invention which is specialized for use in a low cost, low security environment with fully human unattended local and remote, operation as in security video camcorder use for this embodiment, which comprises:

a camcorder body, furthermore, with functional physical unit protection from the weather and elements through structural camcorder casing, furthermore, having structural means of attachment points for unit assembly of the various camera unit components,

a specialized proximate wide angle, medium resolution video camera lens [MED-RES LENS], furthermore, arranged in a duo-lens system with functional placement inside of a first end or aiming end or front end of said camcorder body for maximized optical viewing effect,

a specialized, proximate narrow angle, high resolution video camera lens [HI-RES LENS], furthermore, arranged in a duo-lens system with functional placement inside of a first end of front end of said camcorder body for maximized optical viewing effect,

a motion audio-video signal production circuit means, furthermore, with 1st structural example means of a charge coupled device [MED-RES CCD] also including a matching, analog to digital converter [MED-RES ADC], and 2nd structural example means of a CMOS vision chip [MED-CMOS VISION], furthermore, having structural means for functional optical to analog electrical conversion [O2E] video production and also included only if necessary, analog to digital converter [ADC] for output of 100% digital data signals,

a medium resolution, H-box or hold box [MED-RES H-BOX] being half of a standard linear control circuit, with structural means for functional storage of real-time, contrast image data for input into the digital computer algorithm which controls said specialized proximate wide viewing angle, said specialized proximate wide angle, medium resolution video camera lens [MED-RES LENS], furthermore, with structural means for functional use in closed loop, servo-motor control of passive auto-focus mode control of the said, specialized proximate wide angle, medium resolution video camera lens [MED-RES LENS] associated with this control circuit function,

a medium resolution, G-box or gain box [MED-RES G-BOX] half of a standard linear control circuit, with structural means for functionally controlling of the real-time, auto-focus position of said, specialized proximate wide angle, medium resolution video camera lens [MED-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer

computed from the input of said medium resolution associated H-box or hold box [MED-RES H-BOX] of real-time contrast image data from said moving audio-video production circuit [MED-RES CCD, or else, MED-RES CMOS VISION] for moving optical to digital [O2D] video production with structural means for functional use of the contrast image data from said moving audio-video production circuit [MED-RES CCD, or else, MED-RES CMOS VISION] for moving digital video production used by a digital computer to compute by active user selected, focus mode algorithm, real-time, closed loop, servo control lens position settings for the said specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS] which is a particular form of basic, passive auto-focus mode of the said specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS],

a still video production circuit means, furthermore, with 1st structural example means of a charge coupled device [HI-RES CCD] also including a matching, analog to digital converter [HI-RES ADC], and 2nd structural example means of a CMOS vision chip [HI-RES CMOS VISION], furthermore, having structural means for functional optical to analog electrical production [O2E] video production and also included only if necessary, analog to digital converter [ADC] for output of 100% digital data signals,

a high resolution, prior art component, H-box or hold box [HI-RES H-BOX] being half of a standard linear control circuit, with structural means for functional storage of real-time, contrast

image data for input into the digital computer algorithm which controls said specialized proximate narrow viewing angle, said specialized proximate narrow viewing angle, high resolution video camera lens [HI-RES LENS], furthermore, with structural means for functional use in closed loop, servo-motor control of passive auto-focus mode control of the said, specialized proximate wide angle, medium resolution video camera lens [HI-RES LENS] associated with this control circuit function,

a high resolution associated prior art component, G-box or gain box [HI-RES G-BOX] half of a standard linear control circuit with structural means for functionally controlling of the real-time, auto-focus position of said, specialized, proximate narrow angle, high resolution, audio-video camera lens [HI-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer computed from the input of said high resolution associated H-box or hold box [HI-RES H-BOX] of real-time contrast image data from said still video production circuit [HI-RES CCD or else, HI-RES CMOS VISION] for optical to digital moving digital video production with structural means for functional use of the contrast image data from said still video production circuit [HI-RES CCD, or else HI-RES CMOS VISION] for digital moving video production used by digital computer algorithm to compute a real-time, closed loop, servo control lens position settings for the said proximate wide viewing angle, high resolution video camera lens [HI-RES LENS] which is a particular form of basic, passive

auto-focus mode of the said specialized, proximate narrow angle, high resolution audio-video camera lens [HI-RES LENS],

a digital computer, furthermore, with structural means for functional embedded digital computing, furthermore, 1st example structural means of a prior art, digital signal processor [DSP], furthermore, executing of prior art, digital computer algorithms with 1st example digital computer algorithms being given as closed loop servo motor linear control algorithms, 2nd example digital computer algorithms being given as user selected embedded control, firmware, closed loop servo process, auto-focus modes to optimize certain filming conditions such as: low light, distance shots only allowing spherical aberration adjustments in auto-focus mode, close-up shots only allowing spherical aberration adjustments in auto-focus mode, medium range shots only allowing spherical aberration adjustments in auto-focus mode, low light auto-focus modes,

a prior art, motion audio-video digital compression algorithm, furthermore, using a prior art, lossy, digital audio-video compression technique, furthermore, with 1st example structural means being MPEG II, furthermore with 2nd example structural means being MPEG IV, furthermore, with 3rd example structural means of MPEG VII, furthermore, with 4th example structural means being motion JPEG I, furthermore, with 5th example structural means being prior art, non-standardized fast wavelet transform [FWT] audio-video digital compression, furthermore, providing means for

functional lossy digital compression of moving audio-video frames to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT], furthermore, said prior art, motion audio-video digital compression algorithm is slightly modified for purposes of this invention, by use of a prior art, slightly modified, lossy, digital motion audio-video compression technique, furthermore, having structural means for functional lossy digital compression of motion audio-video only frames without audio, to reduce digital bandwidth [MPEG II FORMAT, MPEG IV FORMAT, MPEG VII FORMAT, MOTION JPEG I FORMAT, FWT FORMAT] digital output is per motion audio-video frame, digitally time-stamped by means of a new art, cryptography silhouette technique of using inter-frame prior art digital compression algorithm determined, 'low visual priority' only equated to a prior art algorithm's, uniquely determined, color pixel high frequency rate [Hertz], and also identifying of 'stationary back-ground scenery' equated to determination by adjoining still audio-video frames having non-changing bits, as determined by said prior art audio-video digital compression which has a new art of this invention, slightly modified, digital compression algorithm, followed by selective adjoining chosen pixel replacement with very high frequency, per audio-video frame annotation data, with 1st example structural means being, digital time-stamps, and 2nd example structural means being additional position-stamps as from a satellite navigation device's digital input,

a prior art, still video digital compression algorithm, furthermore, using a prior art, lossy, digital still video

compression technique, furthermore, with 1st example means of JPEG I, 2nd example means of JPEG 2000 which is fast wavelet transform (FWT) based, furthermore, with structural means for functional lossy digital compression of still video only frames without audio, to reduce digital bandwidth [STILL VIDEO FORMAT], furthermore, said prior art, still video digital compression algorithm is slightly modified for purposes of this invention, by use of a prior art, slightly modified, lossy, digital still video compression technique, furthermore, having structural means for functional lossy digital compression of still video only frames without audio, to reduce digital bandwidth [JPEG I STILL VIDEO FORMAT, or else fast wavelet transform [FWT] based JPEG 2000 STILL VIDEO FORMAT]. digital output is per still video frame, digitally time-stamped by means of a new art, cryptography silhouette technique of using inter-frame prior art digital compression algorithm determined, 'low visual priority' only as equated with a unique prior art digital compression method's high color frequency [Hertz] value, and also 'stationary back-ground scenery' as determined by adjoining still video frames having non-changing bits, furthermore, determined by said prior art still video digital compression which has a slightly modified, algorithm, followed by selective adjoining chosen pixel replacement with very high frequency, per video frame annotation data, with 1st example structural means being, digital time-stamps, and 2nd example structural means being additional position-stamps as from a satellite navigation device's digital input, furthermore, the subsequently digitally compressed still video in said camcorder body output, is interspersed within said

also digitally compressed motion audio-video from said camcorder body output, furthermore, said motion audio-video is also said camcorder body's digital processing per motion video frame, digitally time-stamped in a similar manner, digital output of said prior art, and also per frame digitally time-stamped, relatively high frame production rate and medium frame video pixel resolution, lossy, digital video compression technique, furthermore, with structural means for functional lossy digital compression of moving audio-video frames to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT] output to form a new art by this present process, per video frame time-stamped, hybrid still video periodic time, interspersed into motion audio-video, compressed digital output form [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

a prior art, analog micro-phone circuit with structural means for functional analog audio signal production for input into a prior art, audio, analog to digital converter [AUDIO ADC],

said prior art, audio analog to digital converter circuit [AUDIO ADC] with structural means for digitization of the input analog audio, furthermore, with a 1st example means of digital audio production being 16-bits per audio sample at a 44.1 Kilo-Hertz audio sampling rate,

a power supply for the said audio-video security digital camcorder,

a local area network [LAN], furthermore, standard LAN connections made to said digital camcorder's body, furthermore, with 1st example structural means of a wired LAN, furthermore, with 2nd example structural means of a wireless LAN,

a PC, furthermore, connected to said local area network [LAN], furthermore, having a prior art, permanent digital recording device with structural means for functionally recording the new hybrid format, compressed, digital audio-video format data produced [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

whereby a characteristic, twin lens element audio-video camera is produced having a proximate wide angle with proximate lower resolution, auto-focus mode controlled, audio-video camera lens [MED-RES LENS], in simultaneous addition to a secondary, relatively and proximate narrow angle with proximate higher resolution, auto-focus mode controlled, still picture lens [HI-RES LENS], furthermore, enabling hybrid design of simultaneous hi-resolution and low-resolution video production, giving efficient time-stamp correlated, streams based digitally compressed audio-video data without sacrificing detail,

whereby for security video camera use a means exists for post-crime suspect clear identification using a hybrid system of both high frame rate and medium pixel resolution motion audio-video intended for motion studies, mixed in hybrid design or the best of both worlds, with highly intermittent, very low frame rate and very high pixel

resolution still video pictures intended for detailed studies, together giving very bit efficient compressed digital audio-video signal storage on prior art said PC based, physical digital data storage mediums such as: hard disk drive [HDD], DVD [R], DV [R] video tape, and mini-DV [R] video tape,

whereby for security video camera use a said PC means exists as host, for post-editing availability of both high frame rate and medium pixel resolution audio-video for crime investigation use, combined with very low frame rate and very high pixel resolution still video pictures for suspect identification use, furthermore, having enough pixel resolution to support, various angled, clear, color glossy suspect photograph poster size selection.

74. (New) The invention of claim 73 wherein said per video frame digital time-stamp insertion, for both said motion audio-video producing circuit, and also said still video producing circuit, done by said camcorder body, uses a new art, silhouette technique borrowed from the field of digital cryptography, whereby, during the process of video compression, executing the assumed, slightly modified by this sub-process step, prior art, standards based digital video compression function, with 1st example structural means of joint picture electronics group [JPEG I] based upon the discrete cosine transform [DCT], furthermore, 2nd example structural means of JPEG 2000 based upon the fast wavelet transform [FWT] algorithm, furthermore, 3rd example structural means of moving picture electronics group [MPEG II], furthermore, 4th example structural means being moving picture electronics group [MPEG IV] compatible, furthermore, 5th example structural means of MPEG VII, furthermore, 6th example structural means of fast wavelet transform [FWT], furthermore, the executed in slightly modified by the methods of this present invention as follows, prior art, standard digital compression algorithm, is solely used to identify the very first occurring or high frequency [Hertz] of color bits, 'visually insignificant' digital video data, as 1st example structural means of JPEG I, as 2nd example structural means of MPEG II, as 3rd example structural means of MPEG IV, as 4th example structural means of MPEG VII, as 5th example structural means of motion JPEG I, 'visually insignificant' being very high frequency [Hertz] of stray color bits, discrete cosine transform [DCT]

algorithm determined, stray color bits, furthermore, 1st example structural means of JPEG 2000, and 2nd example structural means of prior art, non-standardized, Fast Wavelet Transform [FWT] motion audio-video, 'visually insignificant data' being very high frequency [Hertz] in both the fast wavelet transform [FWT] determined: x-axis and the y-axis solid color block pixel positions, furthermore, additionally identifying the first occurring in slightly modified, prior art, digital compression processing 'quiet back-ground scenery' or 'time invariant' video of small blocks of quiet back-ground video, by structural means of in the process of digital compression, video bit comparison between adjoining video frames, furthermore, which are digital filtering marked as the first occurring both: 'visually insignificant' and also 'time invariant,' small blocks of video data, can be said camcorder body's digital processor executed, 'cut and paste' algorithm, digitally edited out into a supplementary 2-D [row: starting byte of un-compressed digital frame, and number of bytes of digital time-stamp plus possible position-stamp, column: 'cut and paste' still back-ground video bytes table], furthermore, 'cut and paste' still motion, back-ground scene of 'visual insignificance,' is then digitally replaced by the DSP, with the per video frame digital time-stamp data and possible position-stamp data, furthermore, a structural means of the new art, of a standardized 2-D [row, column] matrix table of 'cut and paste' data, is placed at a new art of this invention, standard protocol position, only 1st structurally exemplified by the beginning of the relevant video frames, and 2nd structurally exemplified by the end of

the relevant video frames, furthermore, said matrix table is used for subsequent, digital de-compression digital processing, digital time-stamp recovery from the embedded video frame and 'cut and paste' replacement, with the silhouette technique the matrix table stored video data representing quiet back-ground video, furthermore, only 1st exemplified by said standardized, 2-D [row, column] matrix table of defining the matrix row as being the digitally un-compressed video data starting byte count, and length byte count, and the matrix column as being the 'cut and paste data,' placed in standard position, at the end of the digitally non-compressed data, furthermore, which must still be run entirely through a standard digital compression procedure [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO COMPRESSION FORMAT],

whereby the present invention achieves a digital security camcorder output, simultaneously output, compressed digital stream of a: hybrid still video and motion audio-video digitally compressed output, which may be recorded to permanent plug-in audio-video digital recording medium of said security camcorder, and said digital output may also be transmitted over a local area network [LAN] for security workstation PC processing, and subsequent permanent storage upon PC permanent recording medium,

whereby the slightly modified prior art standards, are subject to standards committee acceptance as a new revision level standard for standardized digital processing.

75. (New) The invention of claim 73 wherein said camcorder body has upon its first end or front face, positioned one or more active infrared diode [IR] emitters used for relatively near field focusing, as distinguished from passive infrared [IR] camcorders, furthermore, with structural means for functionally producing active infrared wavelength electro-magnetic radiation, furthermore, such infrared radiation or heat radiation is reflected off a warm-blooded moving suspect in the relatively near field, viewing range of the potentially un-manned and un-aimed camera system, with the moving suspect reflection of infrared light added to natural body produced infrared heat or infrared light, furthermore, the relevant solid state still and also motion video devices, with 1st structural means being a CCD [visible and near-IR CCD], and 2nd structural means being a CMOS vision chip [visible and near-IR CMOS vision], are solid state designer and manufacturing process, tuned to accept both visible wavelength light plus near infrared wavelength light.

76. (New) The invention of claim 75 wherein the provided said infrared diode emitters [IR], number more than one and are mounted on said camcorder body arranged in different outwards pointing directions of the possibly fixed mount or pre-aimed, said camcorder body's field of view, in an infrared [IR] focal plane transmitter array or an infrared cone, which in an exemplified security video camcorder's un-attended security camera embodiment operational mode, will be 100% un-manned at the security site, and also 100% absent of a warm blooded human

remote communications channel's remote human operator's, pan and tilt, joy-stick's remote control, thus, said camcorder body will not be user aimable through a remote pan and tilt motion of said camcorder body through any local or remote, warm blooded human user's, manual pan and tilt, aiming motion, thus, necessitating some other means of fully electronic automatic mode of pan and tilt auto-focus, furthermore, the infrared [IR] light reflected off a warm-blooded, moving target is received by charge coupled devices [CCD's] which are sensitive to both visible light and infrared [IR] light images.

77. (New) The invention of claim 73 wherein said digital computer has separate elements of an input and output [I/O] bus, furthermore, with separate provided elements of interrupt and timing circuitry means [embedded controller], furthermore, with digital signal processor [DSP] executed, embedded firmware algorithm programming, implementing of a fully new art, electronic focus mode, called electronic pan and tilt auto-focus mode, used for accomplishing by digital computer algorithm in the digital signal processor [DSP], moving suspect computer motion modeling and moving suspect auto-focus, 2-D matrix charge coupled device [CCD], auto-focus control on a digitally computed estimate of the moving suspect, 2-D [x, y] matrix position, which lacks the z-coordinate [z transform] of depth measurement [machine vision problem], by using prior art, special, embedded, firmware algorithms, using the input data from the combined infrared and visible light, said motion audio-video CCD [MOTION AUDIO-VIDEO CCD], of both still and

moving heat image charge coupled device [VISIBLE AND NEAR-IR CCD], 2-D [x, y], matrix coordinates of [x, y, optional z-axis range or depth of field estimate using a machine vision algorithm, t or time, image heat intensity].

78. (New) The invention of claim 73 whereby the specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS] with its associated said medium resolution, G-box or gain box [MED-RES G-BOX] half of a standard linear control circuit, receives from the digital computer's prior art, computer motion model algorithm which estimates both a warm blooded suspect's moving position and the single, auto-focus lens position for only the relevant lens, the G-box or gain box equivalent setting to do precise lens focal position adjustment.

79. (New) The invention of claim 73 whereby the proximate medium angle, high resolution video camera lens [HI-RES LENS] with its associated said high resolution, G-box or gain box [HI-RES G-BOX] half of a standard linear control circuit, receives from the digital computer's computer motion model algorithm which estimates both a warm blooded suspect's moving position and the angle, auto-focus lens position for only the relevant lens, the G-box or gain box equivalent setting to do precise lens focal position adjustment.

79. (New) The invention of claim 73 wherein the provided closed loop servo-motor controlled passively auto-focused camera lens

optimized for medium-angle still photographic use, receives from the micro-processor's computer motion model the motor controls for a single suspect of interest and does micro-processor bus latch to discrete analog control circuitry lens motion.

80. (New) The invention of claim 73 wherein the provided analog to digital converter [ADC] converts all CCD output from analog to digital, furthermore, with structural means for functionally achieving digital video processing groups of video rows [16 x 16 pixel standard MPEG IV macro-blocks] un-peeled in video rows [slices] of a single movie frame conversion, furthermore with means for processing 8 x 8 pixel DCT blocks for JPEG I processing [JPEG I video frames] of a single still frame, furthermore, with means of processing audio streams of data.

81. (New) The invention of claim 73 wherein the provided MPEG IV compatible, including MPEG VII, digital compression algorithm which may be implemented in dedicated, hardware circuitry has means for processing rows of video [16 x 16 pixel standard MPEG IV macro-blocks] from a single movie frame, furthermore the algorithm has prior art, means for 3-axis color model conversion, furthermore, the algorithm has structural means for a prior art, digital compression algorithm, whose prior art design must by computer algorithm, distinguish 'visually unimportant data' for selective drop out in lossy data compression, furthermore, the algorithm has prior art, means for adding error detection and correction parity bits [RS coding], furthermore, the algorithm has prior art, means

for using the digital computer bus to deposit the groups of video rows [16 x 16 pixel standard MPEG IV macro-blocks] into digital computer associated, dynamic random access memory [DRAM] in an eventual complete motion audio-video frame, which is given the MPEG IV compatible, 'decode time stamp [DTS],' furthermore, the MPEG X compatible, circuit inputs digital sound from 2 channel audio associated, relatively low data rate, analog to digital converters [ADC's] and digitally compresses the 2 channel audio digital sound, using a digital compression audio mode of the MPEG IV compatible audio digital compression standard for audio stream output, furthermore, also with inserted into the 2 channel audio digital sound of MPEG IV compatible 'MPEG IV decode time stamps [DTS].'

82. (New) The invention of claim 73 wherein the provided JPEG I compatible by use of the discrete cosine transform [DCT] algorithm, digital compression circuitry has prior art, means for processing 8 x 8 DCT algorithm rows of video from a single still picture frame, furthermore it has prior art, means for 3-axis color model conversion, furthermore it has prior art, means for a JPEG I compatible digital compression algorithm [DCT] which can distinguish 'visually un-important data' for selective drop out in lossy data compression, furthermore it has prior art, means for adding error detection and correction parity bits, furthermore, it has prior art, means for using the digital computer's processor bus to deposit the groups of still picture rows into DRAM memory in an eventual complete still picture frame, which has a digital time-stamp structural means involving several invention processes, with

a 1st example structural means being MPEG I defined 'presentation time stamp [PTS],' the 2nd example digital time-stamp structural means being MPEG II 'decode time-stamps [DTS],' and the 3rd example digital time-stamp structural means, being a similar time-stamp used for fast wavelet transform [FWT] digital compression.

83. (New) The invention of claim 73 wherein the provided dynamic random access memory [DRAM] is used for temporary data store of actions with digital signal processor [DSP] structural means for collecting from both the MPEG IV compatible, and also JPEG I compatible, discrete cosine transform [DCT] based, digital compression circuits the groups of rows of video for a single video frame, until a completed either movie MPEG IV compatible motion video frame, and also a still picture JPEG I compatible still video frame is completely assembled, furthermore, with structural means of collecting a MPEG IV compatible digitally compressed digital audio stream, furthermore, with means for MPEG X compatible control stream assembling of the various digital streams into a hybrid output data stream, called the new art, with this invention, the proposed: MPEG IV Level S1/E1 compressed audio-video digital stream by using S1 for security industry and E1 for entertainment industry, furthermore, which uses a prior art, MPEG IV compatible, efficient frame re-ordering means for real-time audio-video production, transmission over a LAN, and real-time audio-video consumption of the so called, 'MPEG IV Level S1/E1 compressed audio-video digital stream.'

84. (New) The invention of claim 73 wherein the provided electrically erasable programmable read only memory [EEPROM] has means for permanent computer program store.

85. (New) The invention of claim 73 wherein the provided first in first out buffer [FIFO] is used to connect an input and output [I/O] bus device to computer memory.

86. (New) The invention of claim 83 wherein the provided output audio and video stream recorded is a new with this invention proposed MPEG X like level called the new proposed MPEG IV level S1/E1 format for security level 1 and entertainment level 1, furthermore, with 1st means for use as a 100% un-manned security digital video camera, furthermore, with 2nd means for use as an alternative invention embodiment for manned audio-video entertainment movie shoots, using hybrid MPEG IV compatible digitally compressed audio-video along with a much lower rate stream of still JPEG like digitally compressed, higher resolution, photos.

87. (New) The invention of claim 86 wherein the new proposed MPEG IV level S1/E1 format, for 1st functional means of 100% un-manned security audio-video shooting, and a 2nd functional means for 100% manned by professional entertainment movie shooting, furthermore, holds digital position-stamp data, furthermore, with 1st example structural means being GPS satellite navigation date, GPS time accurate to 1 micro-second at the recording

digital computing element with a time modeled digital computing bus and processing queuing latency model given the prior art, 1 nano-second accurate GPS time transfer mode at the prior art, GPS front-end RADIO frequency receiver and digital baseband processing, GPS latitude, GPS longitude, GPS altitude, delta GPS position, attitude data from an inertial reference unit's [IRU's] given typical stick air-plane data, video channel data, pilot text notes, terrain map data, interactive television guide data in a "silhouette-like" cryptography technique in potentially every frame using static background areas to store data.

88. (New) The invention of claim 73 wherein the provided removable permanent memory device is a structural means of helical scanning, digital video tape cassette, with 1st example structural means being DV [R] brand of 100% digital recording tape used in industrial sized, camcorder devices.

89. (New) The invention of claim 73 wherein the provided removable permanent memory device is remotely connected to the video camera through a functional means of a video local area network [video-LAN] with a 1st example structural means being a broadband cable network, furthermore, a 2nd example structural means being a "Firewire" or IEEE 1384 network with interface circuitry, a 3rd example structural means being a slower and cheaper, but, shorter range of maximum 10 [feet], standard

Universal Serial Bus [USB] cable with interface circuitry, a 4th example structural means being a wireless network with circuitry.

90. (New) The invention of claim 73 wherein the provided removable permanent memory device is remotely connected to the video camera through a video local area network [video-LAN], with an example structural means being a high cost, high reliability, high noise immunity, but, very costly fiber optic network.

91. The invention of claim 73 wherein the provided functional means of said power supply is an example structural means of a nickel cadmium ["ni cad"] battery re-charged by a separate power line in the video local area network [V-LAN].

92. (New) The present applicant claims a new process or systems invention which is specialized for use in a low cost, low security environment with fully human unattended local and remote, operation as in security video camera use for this embodiment, which comprises:

a camcorder body with structural means for functional physical unit protection from the weather and elements, furthermore, unit assembly of the various camera unit components,

a digital computer with structural means for functional embedded digital computing, furthermore, with 1st example digital computer algorithms being given as closed loop servo motor linear control algorithms, 2nd example digital computer algorithms being given as user selected embedded control, firmware, closed loop servo process, auto-focus modes to optimize certain filming conditions such as: low light, distance shots only allowing spherical aberration adjustments in auto-focus mode, close-up shots only allowing spherical aberration adjustments in auto-focus mode, medium range shots only allowing spherical aberration adjustments in auto-focus mode, low light auto-focus modes,

a specialized proximate wide angle, medium resolution video camera lens [MED-RES LENS] arranged in a duo-lens system with functional placement inside of a first end or aiming end or front end of said camcorder body for maximized optical viewing effect,

a medium resolution CMOS vision chip [MED RES CMOS VISION], furthermore, without a need for a medium data rate analog to digital converter [MED-RES ADC], with structural means for functional optical to analog electrical conversion [O2E] video production,

a medium resolution associated H-box or hold box [MED-RES H-BOX] half of a standard linear control circuit with structural means for functional storage of real-time, contrast image data for input into the digital computer algorithm which controls said specialized proximate wide viewing angle, said specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS], furthermore, with structural means for functional use in closed loop, servo-motor control of passive auto-focus mode control of the said, specialized proximate wide angle, medium resolution video camera lens [MED-RES LENS] associated with this control circuit function,

a medium resolution, G-box or gain box [MED-RES G-BOX] half of a standard linear control circuit with structural means for functionally controlling of the real-time, auto-focus position of said, specialized proximate wide angle, medium resolution video camera lens [MED-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer computed from the input of said medium resolution associated H-box or hold box [MED-RES H-BOX] of real-time contrast image data from the medium resolution charge coupled device [MED-RES CCD] for

moving optical to digital [O2D] video production with structural means for functional use of the contrast image data from said medium resolution charge coupled device [MED-RES CCD] for moving digital video production used by a digital computer to compute by active user selected, focus mode algorithm, real-time, closed loop, servo control lens position settings for the said specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS] which is a particular form of basic, passive auto-focus mode of the said specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS],

a specialized, proximate narrow angle, high resolution video camera lens [HI-RES LENS] arranged in a duo-lens system with functional placement inside of a first end of front end of said camcorder body for maximized optical viewing effect,

a high resolution, CMOS vision chip [HI-RES CMOS VISION], furthermore, without a need for a high-data rate analog to digital converter [HI-RES ADC], furthermore, with structural means for functional optical to analog electrical production [O2E],

a high resolution, H-box or hold box [HI-RES H-BOX] half of a standard linear control circuit with structural means for functional storage of real-time, contrast image data for input into said digital computer which computes by user selected auto-focus mode control algorithm the auto-focus position of said specialized, high resolution, narrow viewing angle audio-video camera lens [HI-

RES LENS], furthermore, with structural means for functional use in closed loop, servo-motor control of passive auto-focus mode control of the said, specialized, high resolution, narrow viewing angle audio-video camera lens [HI-RES LENS] associated with this control circuit function,

a high resolution associated G-box or gain box [HI-RES G-BOX] half of a standard linear control circuit with structural means for functionally controlling of the real-time, auto-focus position of said, specialized, proximate narrow angle, high resolution, audio-video camera lens [HI-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer computed from the input of said high resolution associated H-box or hold box [HI-RES H-BOX] of real-time contrast image data from the high resolution charge coupled device [HI-RES CCD] for optical to digital moving digital video production with structural means for functional use of the contrast image data from said high resolution charge coupled device [HI-RES CCD] for digital moving video production used by digital computer algorithm to compute a real-time, closed loop, servo control lens position settings for the said proximate wide viewing angle, high resolution video camera lens [HI-RES LENS] which is a particular form of basic, passive auto-focus mode of the said specialized, proximate narrow angle, high resolution audio-video camera lens [HI-RES LENS],

a prior art, motion audio-video digital compression algorithm, furthermore, using a prior art, lossy, digital video compression

technique, with 1st example structural means of MPEG II, 2nd example structural means of MPEG IV, 3rd example structural means of MPEG VII, 4th example structural means of motion JPEG I, 5th example structural means of prior art, non-standard fast wavelet transform [FWT], furthermore, with structural means for functional lossy digital compression of moving audio-video frames to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT], furthermore, said prior art, motion audio-video digital compression algorithm, lossy, digital audio-video compression technique with structural means for functional lossy digital compression of still video only frames with audio, to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT] digital output, is slightly modified in revisions standards by the new art methods of this present invention to allow, digitally time-stamped per video frame and per audio digital frame, motion audio-video output [MOTION AUDIO-VIDEO FORMAT], furthermore, which is lossy digitally compressed by the prior art motion audio-video standard to reduce the amount of transmission audio-video representation bits, furthermore, which is visually interspersed by the digital output of said prior art, still video digital compression algorithm to form a new hybrid digital output form [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

said prior art, still video digital compression algorithm, furthermore, using a prior art, lossy, digital video compression technique with structural means for functional lossy digital compression of still video only frames without audio, to reduce digital bandwidth [STILL VIDEO FORMAT], furthermore, with 1st

example means of JPEG I, 2nd example structural means of JPEG 2000, furthermore, said prior art, still video digital compression algorithm, lossy, digital video compression technique with structural means for functional lossy digital compression of still video only frames without audio, to reduce digital bandwidth [STILL VIDEO FORMAT] digital output, is slightly modified in revisions standards by the new art methods of this present invention to allow, digitally time-stamped and then interspersed within the digital output of said prior art, motion audio-video digital compression algorithm, lossy, digital video compression technique with structural means for functional lossy digital compression of moving audio-video frames to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT] output to form a new hybrid digital output form [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

a prior art, analog micro-phone circuit with structural means for functional analog audio signal production for input into a prior art, audio, analog to digital converter [AUDIO ADC],

said prior art, audio analog to digital converter circuit [AUDIO ADC] with structural means for digitization of the input analog audio, furthermore, with an example means of digital audio production being 16-bits per audio sample at a 44.1 Kilo-Hertz audio sampling rate,

a prior art, permanent digital recording device with structural means for functionally recording the new hybrid format, compressed,

digital audio-video format data produced [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT], with 1st structural means of a plug-in DV [R] brand of digital audio-video camcorder tape, furthermore, with 2nd structural means of plug-in EEPROM memory cards, furthermore, with 3rd structural means of a wired LAN connected PC with a permanent digital recording device, furthermore, with a 4th structural means of a wireless LAN connected PC with a permanent digital recording device,

a power supply,

whereby a characteristic, twin lens element audio-video camera is produced having a proximate wide angle with proximate lower resolution, auto-focus mode controlled, audio-video camera lens [LO-RES LENS], in simultaneous addition to a secondary, relatively and proximate narrow angle with proximate higher resolution, auto-focus mode controlled, still picture lens [HI-RES LENS], furthermore, enabling hybrid design of simultaneous hi-resolution and low-resolution video production, giving efficient time-stamp correlated, streams based digitally compressed audio-video data without sacrificing detail,

whereby for security video camera use a means exists for post-crime suspect clear identification using a hybrid system of both high frame rate and medium pixel resolution motion audio-video intended for motion studies, mixed in hybrid design or the best of both worlds, with highly intermittent, very low frame rate and very high pixel

resolution still video pictures intended for detailed studies, together giving very bit efficient compressed digital audio-video signal storage on prior art physical digital data storage mediums such as: hard disk drive [HDD], DVD [R], DV [R] video tape, and mini-DV [R] video tape,

whereby for security video camera use a means exists for post-editing availability of both high frame rate and medium pixel resolution audio-video for crime investigation use, combined with very low frame rate and very high pixel resolution still video pictures for suspect identification use, furthermore, having enough pixel resolution to support, various angled, clear, color glossy suspect photograph poster size selection.

93. (New) The present applicant claims a new process or systems invention which is specialized for use in a manned by highly paid professionals, attended movie camera use for this embodiment, which comprises:

a camcorder body with structural means for functional physical unit protection and assembly of the camera unit,

a digital computer with structural means for functional embedded digital computing, furthermore, with 1st example digital computer algorithms being given as closed loop servo motor linear control algorithms, 2nd example digital computer algorithms being given as user selected auto focus modes to optimize certain filming conditions such as low light, distance shots only allowing spherical aberration adjustments in auto-focus mode, close-up shots only allowing spherical aberration adjustments in auto-focus mode, medium range shots only allowing spherical aberration adjustments in auto-focus mode,

a specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS] arranged in a duo-lens system with functional placement inside of a first end or front end of said camcorder body for maximized optical viewing effect,

a medium resolution charge coupled device [MED-RES CCD] with structural means for functional optical to analog electrical conversion [O2E] video production,

a medium resolution and high data rate, analog to digital converter [MED-RES ADC] with structural means for functional analog to digital conversion [ADC],

a medium resolution associated H-box or hold box [MED-RES H-BOX] half of a standard linear control circuit with structural means for functional storage of real-time, contrast image data for input into the digital computer algorithm which controls said specialized, medium angle, medium resolution video camera lens [MED-RES LENS], furthermore, with structural means for functional use in closed loop, servo-motor control of passive auto-focus mode control of the said, specialized, medium-angle, medium resolution video camera lens [MED-RES LENS] associated with this control circuit function,

a medium resolution, G-box or gain box [MED-RES G-BOX] half of a standard linear control circuit with structural means for functionally controlling of the real-time, auto-focus position of said, specialized medium-angle, low resolution video camera lens [MED-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer computed from the input of said medium resolution associated H-box or hold box [MED-RES H-BOX] of real-time contrast image data from the medium resolution charge coupled device [MED-RES CCD] for moving

optical to digital [O2D] video production with structural means for functional use of the contrast image data from said medium resolution charge coupled device [MED-RES CCD] for moving digital video production used by a digital computer to compute by active user selected, focus mode algorithm, real-time, closed loop, servo control lens position settings for the said medium angle, medium resolution video camera lens [MED-RES LENS] which is a particular form of basic, passive auto-focus mode of the said specialized, medium-angle, medium resolution video camera lens [MED-RES LENS],

a prior art, motion audio-video digital compression algorithm, furthermore, using a prior art, lossy, digital video compression technique, furthermore, with structural means for functional lossy digital compression of moving audio-video frames to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT], with 1st example structural means of MPEG II, 2nd example structural means of MPEG IV, 3rd example structural means of MPEG VII, 4th example structural means of motion JPEG I, 5th example structural means of prior art, non-standard fast wavelet transform [FWT], furthermore, said prior art, motion audio-video digital compression algorithm, lossy, digital audio-video compression technique with structural means for functional lossy digital compression of still video only frames with audio, to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT] digital output, is slightly modified in proposed revisions standards, by the new art methods of this present invention to allow, digitally time-stamped per video frame and per audio digital frame, motion audio-video output [MOTION AUDIO-VIDEO FORMAT],

furthermore, which is lossy digitally compressed by the prior art motion audio-video standard to reduce the amount of transmission audio-video representation bits, furthermore, which is visually interspersed by the digital output of said prior art, still video digital compression algorithm to form a new hybrid digital output form [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

a proximate narrow angle, high resolution video camera lens [HI-RES LENS] arranged in a duo-lens system with functional placement inside of a first end of front end of said camcorder body for maximized optical viewing effect,

a high resolution, charge coupled device [HI-RES CCD] with structural means for functional optical to analog electrical production [O2E],

a high resolution and low data rate, analog to digital converter [HI-RES ADC] with structural means for functional analog to digital conversion [ADC],

a high resolution, H-box or hold box [HI-RES H-BOX] half of a standard linear control circuit with structural means for functional storage of real-time, contrast image data for input into said digital computer which computes by user selected auto-focus mode control algorithm the auto-focus position of said specialized narrow viewing angle, high resolution lens [HI-RES LENS], furthermore, with structural means for functional use in closed

loop, servo-motor control of passive auto-focus mode control of the said, specialized proximate wide viewing angle, high resolution lens [HI-RES LENS] associated with this control circuit function,

a high resolution associated G-box or gain box [HI-RES G-BOX] half of a standard linear control circuit with structural means for functionally controlling of the real-time, auto-focus position of said, proximate narrow angle, high resolution video camera lens [HI-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer computed from the input of said high resolution associated H-box or hold box [HI-RES H-BOX] of real-time contrast image data from the high resolution charge coupled device [HI-RES CCD] for optical to digital moving digital video production with structural means for functional use of the contrast image data from said high resolution charge coupled device [HI-RES CCD] for digital moving video production used by digital computer algorithm to compute a real-time, closed loop, servo control lens position settings for the said proximate narrow angle, high resolution video camera lens [HI-RES LENS] which is a particular form of basic, passive auto-focus mode of the said proximate narrow angle, high resolution video camera lens [HI-RES LENS],

said prior art, still video digital compression algorithm, furthermore, using a prior art, lossy, digital video compression technique with structural means for functional lossy digital compression of still video only frames without audio, to reduce

digital bandwidth [STILL VIDEO FORMAT], with 1st example structural means of JPEG I, 2nd example structural means of JPEG 2000, furthermore, said prior art, still video digital compression algorithm, lossy, digital video compression technique with structural means for functional lossy digital compression of still video only frames without audio, to reduce digital bandwidth [STILL VIDEO FORMAT] digital output, is slightly modified in revisions standards by the new art methods of this present invention to allow, digitally time-stamped and then interspersed within the digital output of said prior art, motion audio-video digital compression algorithm, lossy, digital video compression technique with structural means for functional lossy digital compression of moving audio-video frames to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT] output to form a new hybrid digital output form [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

a prior art, analog micro-phone circuit with structural means for functional analog audio signal production for input into a prior art, audio, analog to digital converter [AUDIO ADC],

said prior art, audio analog to digital converter circuit [AUDIO ADC] with structural means for digitization of the input analog audio, furthermore, with an example means of digital audio production being 16-bits per audio sample at a 44.1 Kilo-Hertz audio sampling rate,

a prior art, permanent digital recording device with structural means for functionally recording the new hybrid format, compressed, digital audio-video format data produced [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT], with 1st structural means of a plug-in DV [R] brand of digital camcorder tape, furthermore, with 2nd structural means of a plug-in EEPROM memory card, furthermore, with 3rd structural means of a LAN connected PC with a permanent digital recording device,

a power supply,

whereby a characteristic, twin lens element audio-video camera is produced having a proximate wide angle with proximate lower resolution, auto-focus mode controlled, audio-video camera lens [LO-RES LENS], in simultaneous addition to a secondary, relatively and proximate narrow angle with proximate higher resolution, auto-focus mode controlled, still picture lens [HI-RES LENS], furthermore, enabling hybrid design of simultaneous hi-resolution and low-resolution video production, giving efficient time-stamp correlated, streams based digitally compressed audio-video data without sacrificing detail,

whereby for attended movie camera use a means exists for post-crime suspect clear identification using a hybrid system of both high frame rate and medium pixel resolution motion video, plus very low frame rate and very high pixel resolution still video pictures,

whereby for attended movie camera use a means exists for post-editing availability of both high frame rate and medium pixel resolution video for cinema use, plus very low frame rate and very high pixel resolution still video pictures for prior art, blue frame, special effect back-ground scene addition and also color glossy promotional poster frame selection.

93. (New) The invention of claim 92 wherein said per video frame digital time-stamp insertion, for both said motion audio-video producing circuit, and also said still video producing circuit, done by said camcorder body, uses a new art, silhouette technique borrowed from the field of digital cryptography, whereby, during the slightly modified by the new art methods of this patent, process of proposed revised standards based, video compression, executing the assumed, slightly modified by this sub-process step, prior art, standards based digital video compression function, with 1st example structural means of joint picture electronics group [JPEG I], furthermore, 2nd example structural means of JPEG 2000 based upon the fast wavelet transform algorithm, furthermore, 3rd example structural means of moving picture electronics group [MPEG II], furthermore, 4th example structural means being moving picture electronics group [MPEG IV] compatible, furthermore, 5th example structural means of MPEG VII, furthermore, 6th example structural means of fast wavelet transform [FWT], furthermore, the executed in processing, slightly modified by the methods of this present invention as follows, prior art, standard digital compression algorithm, is solely used to identify the very first occurring, 'visually insignificant,' interpreted as high visual frequency [Hertz], digital video data, as 1st example structural means of JPEG I, as 2nd example structural means of MPEG II, 3rd example structural means of MPEG IV, 4th example structural means of MPEG VII, being very high frequency [Hertz] discrete cosine transform [DCT] stray color bits, furthermore, 5th example structural means

of JPEG 2000, and 6th example structural means of non-standardized, Fast Wavelet Transform [FWT] video, being very high frequency [Hertz] in both the x-axis and the y-axis, fast wavelet transform [FWT], furthermore, additionally identifying 'visually insignificant' digital video data interpreted as high frequency [Hertz] fast wavelet transform algorithm computed, x-axis and y-axis position of digital video blocks, furthermore, identifying of the first video blocks of 'time invariant' or 'quiet background scenery' small blocks of quiet back-ground video as 'cut and paste' replacement video candidates, by structural means of not yet compressed video bit comparison between adjoining video frames, furthermore, which first encountered, 'visually insignificant' and also 'time invariant' small blocks of video data can be said camcorder body's digital processor executed, 'cut and paste' algorithm, digitally edited out into a supplementary 2-D [row: starting byte of un-compressed digital frame, and number of bytes of digital time-stamp plus possible position-stamp, column: 'cut and paste' still back-ground video bytes table], furthermore, 'cut and paste' still motion, back-ground scene of 'visual insignificance,' is then digitally replaced by the DSP, with the per video frame digital time-stamp data and possible position-stamp data, furthermore, a structural means of the new art, of a standardized 2-D [row, column] matrix table of 'cut and paste' data, is placed at a new art of this invention, standard protocol position, only 1st structurally exemplified by the beginning of the relevant video frames, and 2nd structurally exemplified by the end of the relevant video frames, furthermore, said matrix table is used

for subsequent, digital de-compression digital processing, digital time-stamp recovery from the embedded video frame and 'cut and paste' replacement, with the silhouette technique the matrix table stored video data representing quiet back-ground video, furthermore, only 1st exemplified by said standardized, 2-D [row, column] matrix table of defining the matrix row as being the digitally un-compressed video data starting byte count, and length byte count, and the matrix column as being the 'cut and paste data,' placed in standard position, at the end of the digitally non-compressed data, furthermore, which must still be run entirely through a standard digital compression procedure [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO COMPRESSION FORMAT].

94. (New) The present applicant claims a new process or systems invention which is specialized for use in a manned by highly paid professionals, attended movie camera use for this embodiment, which comprises:

a camcorder body with structural means for functional physical unit protection and assembly of the camera unit,

a digital computer with structural means for functional embedded digital computing, furthermore, with 1st example digital computer algorithms being given as closed loop servo motor linear control algorithms, 2nd example digital computer algorithms being given as user selected auto focus modes to optimize certain filming conditions such as low light, distance shots only allowing spherical aberration adjustments in auto focus mode, close up shots only allowing spherical aberration adjustments in auto-focus mode, medium range shots only allowing spherical aberration adjustments in auto focus mode,

a specialized, proximate wide angle, medium resolution video camera lens [MED-RES LENS] arranged in a duo-lens system with functional placement inside of a first end or front end of said camcorder body for maximized optical viewing effect,

a medium resolution CMOS vision chip [MED-RES CMOS VISION], furthermore, without a need for a medium data rate analog to digital converter [MED-RES ADC], furthermore, with structural means for functional optical to analog electrical conversion [O2E] video production,

a medium resolution associated H-box or hold box [MED-RES H-BOX] half of a prior art, standard linear control circuit with structural means for functional storage of real-time, contrast image data for input into the digital computer algorithm which controls said specialized, medium angle, medium resolution video camera lens [MED-RES LENS], furthermore, with structural means for functional use in closed loop, servo-motor control of passive auto-focus mode control of the said, specialized, medium-angle, medium resolution video camera lens [MED-RES LENS] associated with this control circuit function,

a medium resolution, G-box or gain box [MED-RES G-BOX] half of a standard prior art, linear control circuit with structural means for functionally controlling of the real-time, auto-focus position of said, specialized medium-angle, low resolution video camera lens [MED-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer computed from the input of said medium resolution associated H-box or hold box [MED-RES H-BOX] of real-time contrast image data from the medium resolution charge coupled device [MED-RES CCD] for moving optical to digital [O2D] video production with structural means for

functional use of the contrast image data from said medium resolution charge coupled device [MED-RES CCD] for moving digital video production used by a digital computer to compute by active user selected, focus mode algorithm, real-time, closed loop, servo control lens position settings for the said medium angle, medium resolution video camera lens [MED-RES LENS] which is a particular form of basic, passive auto-focus mode of the said specialized, medium-angle, medium resolution video camera lens [MED-RES LENS],

a proximate narrow angle, high resolution video camera lens [HI-RES LENS] arranged in a duo-lens system with functional placement inside of a first end of front end of said camcorder body for maximized optical viewing effect,

a high resolution, CMOS vision chip [HI-RES CMOS VISION], furthermore, without a need for an a high data rate analog to digital converter [HI-RES ADC], furthermore, with structural means for functional optical to analog electrical production [O2E],

a high resolution, H-box or hold box [HI-RES H-BOX] half of a standard prior art, linear control circuit with structural means for functional storage of real-time, contrast image data for input into said digital computer which computes by user selected auto-focus mode control algorithm the auto-focus position of said specialized narrow viewing angle, high resolution lens [HI-RES LENS], furthermore, with structural means for functional use in closed loop, servo-motor control of passive auto-focus mode control

of the said, specialized proximate wide viewing angle, high resolution lens [HI-RES LENS] associated with this control circuit function,

a high resolution associated G-box or gain box [HI-RES G-BOX] half of a prior art, standard linear control circuit with structural means for functionally controlling of the real-time, auto-focus position of said, proximate narrow angle, high resolution video camera lens [HI-RES LENS] associated with this control circuit section, furthermore, said G-box or gain box is digital computer computed from the input of said high resolution associated H-box or hold box [HI-RES H-BOX] of real-time contrast image data from the high resolution charge coupled device [HI-RES CCD] for optical to digital moving digital video production with structural means for functional use of the contrast image data from said high resolution charge coupled device [HI-RES CCD] for digital moving video production used by digital computer algorithm to compute a real-time, closed loop, servo control lens position settings for the said proximate narrow angle, high resolution video camera lens [HI-RES LENS] which is a particular form of basic, passive auto-focus mode of the said proximate narrow angle, high resolution video camera lens [HI-RES LENS],

a prior art, motion audio-video digital compression algorithm, furthermore, using a prior art, lossy, digital video compression technique, furthermore, with structural means for functional lossy digital compression of moving audio-video frames to reduce digital

bandwidth [MOTION AUDIO-VIDEO FORMAT], with 1st example structural means of MPEG II, 2nd example structural means of MPEG IV, 3rd example structural means of MPEG VII, 4th example structural means of motion JPEG I, 5th example structural means of prior art, non-standard fast wavelet transform [FWT], furthermore, said prior art, motion audio-video digital compression algorithm, lossy, digital audio-video compression technique with structural means for functional lossy digital compression of still video only frames with audio, to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT] digital output, is slightly modified in proposed revisions standards, by the new art methods of this present invention to allow, digitally time-stamped per video frame and per audio digital frame, motion audio-video output [MOTION AUDIO-VIDEO FORMAT], furthermore, which is lossy digitally compressed by the prior art motion audio-video standard to reduce the amount of transmission audio-video representation bits, furthermore, which is visually interspersed by the digital output of said prior art, still video digital compression algorithm to form a new hybrid digital output form [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

a prior art, still video digital compression algorithm, furthermore, using a prior art, lossy, digital video compression technique with structural means for functional lossy digital compression of still video only frames without audio, to reduce digital bandwidth [STILL VIDEO FORMAT], furthermore, with a 1st example structural means being given as prior art, JPEG I [R] standard, furthermore, with a 2nd structural means for still video

digital compression standards possible such as newer fast wavelet transform [FWT] JPEG 2000, video compression algorithms, furthermore, said prior art, relatively low frame production rate and very high frame video pixel resolution, lossy, digital video compression technique with structural means for functional lossy digital compression of still video only frames without audio, to reduce digital bandwidth [STILL VIDEO FORMAT] digital output is digitally time-stamped by a custom method described in a dependent claim, and then interspersed within the digital output of said prior art, relatively high frame production rate and medium frame video pixel resolution, lossy, digital video compression technique with structural means for functional lossy digital compression of moving audio-video frames to reduce digital bandwidth [MOTION AUDIO-VIDEO FORMAT] output to form a new hybrid digital output form [HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT],

a prior art, analog micro-phone circuit with structural means for functional analog audio signal production for input into a prior art, audio, analog to digital converter [AUDIO ADC],

said prior art, audio analog to digital converter circuit [AUDIO ADC] with structural means for digitization of the input analog audio, furthermore, with an example means of digital audio production being 16-bits per audio sample at a 44.1 Kilo-Hertz audio sampling rate,

a prior art, permanent digital recording device with structural means for functionally recording the new hybrid format, compressed, digital audio-video format data produced [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO FORMAT], furthermore, with 1st structural means of a plug-in DV [R] brand of digital camcorder tape, furthermore, with 2nd structural means of plug-in EEPROM memory card, furthermore, with a 3rd structural means of a LAN connected to a remote PC with a permanent digital recording device,

a power supply,

whereby a characteristic, twin lens element audio-video camera is produced having a proximate wide angle with proximate lower resolution, auto-focus mode controlled, audio-video camera lens [LO-RES LENS], in simultaneous addition to a secondary, relatively and proximate narrow angle with proximate higher resolution, auto-focus mode controlled, still picture lens [HI-RES LENS], furthermore, enabling hybrid design of simultaneous hi-resolution and low-resolution video production, giving efficient time-stamp correlated, streams based digitally compressed audio-video data without sacrificing detail,

whereby for attended movie camera use a means exists for post-crime suspect clear identification using a hybrid system of both high frame rate and medium pixel resolution motion video, plus very low frame rate and very high pixel resolution still video pictures,

whereby for attended movie camera use a means exists for post-editing availability of both high frame rate and medium pixel resolution video for cinema use, plus very low frame rate and very high pixel resolution still video pictures for prior art, blue frame, special effect back-ground scene addition and also color glossy promotional poster frame selection.

95. (New) The invention of claim 94 wherein said per video frame digital time-stamp insertion, for both said motion audio-video producing circuit, and also said still video producing circuit, done by said camcorder body, uses a new art, silhouette technique borrowed from the field of digital cryptography, whereby, during the process of proposed revised prior art, standards based video compression, executing the assumed, slightly modified by this sub-process step, prior art, standards based digital video compression function, with 1st example structural means of joint picture electronics group [JPEG I], furthermore, 2nd example structural means of JPEG 2000 based upon the fast wavelet transform algorithm, furthermore, 3rd example structural means of moving picture electronics group [MPEG II], furthermore, 4th example structural means being moving picture electronics group [MPEG IV] compatible, furthermore, 5th example structural means of MPEG VII, furthermore, 6th example structural means of fast wavelet transform [FWT], furthermore, the executed in processing, slightly modified by the methods of this present invention as follows, prior art, standard digital compression algorithm, is solely used to identify the very first occurring, 'visually insignificant' digital video data, as 1st example structural means of JPEG I, as 3rd example structural means of MPEG II, 4th example structural means of MPEG IV, 5th example structural means of MPEG VII, being very high frequency [Hertz] discrete cosine transform [DCT] stray color bits, furthermore, 2nd example structural means of JPEG 2000, and 6th example structural means of non-standardized, Fast Wavelet

Transform [FWT] video, being very high frequency [Hertz] in both the x-axis and the y-axis, fast wavelet transform [FWT], furthermore, additionally identifying 'visually insignificant,' and also 'time invariant' small blocks of quiet back-ground video, by structural means of not yet compressed video bit comparison between adjoining video frames, furthermore, which 'visually insignificant' and also 'time invariant' small blocks of video data can be said camcorder body's digital processor executed, 'cut and paste' algorithm, digitally edited out into a supplementary 2-D [row: starting byte of un-compressed digital frame, and number of bytes of digital time-stamp plus possible position-stamp, column: 'cut and paste' still back-ground video bytes table], furthermore, 'cut and paste' still motion, back-ground scene of 'visual insignificance,' is then digitally replaced by the DSP, with the per video frame digital time-stamp data and possible position-stamp data, furthermore, a structural means of the new art, of a standardized 2-D [row, column] matrix table of 'cut and paste' data, is placed at a new art of this invention, standard protocol position, only 1st structurally exemplified by the beginning of the relevant video frames, and 2nd structurally exemplified by the end of the relevant video frames, furthermore, said matrix table is used for subsequent, digital de-compression digital processing, digital time-stamp recovery from the embedded video frame and 'cut and paste' replacement, with the silhouette technique the matrix table stored video data representing quiet back-ground video, furthermore, only 1st exemplified by said standardized, 2-D [row, column] matrix table of defining the matrix row as being the

digitally un-compressed video data starting byte count, and length byte count, and the matrix column as being the 'cut and paste data,' placed in standard position, at the end of the digitally non-compressed data, furthermore, which must still be run entirely through a standard digital compression procedure [NEW ART, HYBRID STILL VIDEO AND MOTION AUDIO-VIDEO COMPRESSION FORMAT].

96. The present applicant claims a new process systems patent for a hybrid design, simultaneously recorded, still video and motion audio-video digital camcorder format, connected by local area network [LAN], to a PC based security workstation system with permanent digital recording capacity, which standard LAN protocol, LAN video format comprises the following process or gerund'ing steps, enacted upon prior art, provided said components:

a provided said camcorder body,

a provided said prior art, medium-resolution camcorder zoom lens with prior art, closed loop servo-motor control input, from a digital signal processor [DSP],

a provided said prior art, high-resolution camcorder zoom lens, with prior art, closed loop servo-motor control input, from a digital signal processor [DSP],

a provided said prior art, digital signal processor [DSP],

a provided said prior art, closed loop servo firmware programs for doing auto-focus zoom lens controls,

a provided said prior art, motion audio-video production circuit, furthermore, with 1st example structural means of a charge coupled

device [MED-RES CCD], furthermore, with 2nd example structural means of a CMOS vision chip [MED-RES CMOS VISION],

a provided said prior art, still video production circuit, furthermore, with 1st example structural means of a charge coupled device [HI-RES CCD], furthermore, with 2nd example structural means of a CMOS vision chip [HI-RES CMOS VISION],

a provided said prior art, motion audio-video digital compression program, furthermore, with 1st example structural means of MPEG IV, furthermore, with 2nd example structural means of MPEG VII, furthermore, with 3rd example structural means of motion JPEG I, furthermore, with 4th example structural means of fast wavelet transform [FWT],

a provided said prior art, still video digital compression program, furthermore, with 1st example structural means of JPEG I, furthermore, with 2nd example structural means of fast wavelet transform [FWT] based, JPEG 2000,

a provided said prior art, permanent digital camcorder audio-video digital recording medium, furthermore, with 1st example structural means being prior art, DV [R] brand of helical scanning, digital audio-video tape,

a provided said prior art, local area network [LAN],

a provided said prior art, PC, furthermore, connected to said LAN by use of a prior art plug-in, LAN card,

a provided said prior art, permanent PC digital recording medium, furthermore, connected to said PC as a prior art PC peripheral device,

video'ing rapidly of a digitally un-compressed, motion audio-video picture, furthermore, which is a systems process of the provided said, motion audio-video production circuit, providing a digitally un-compressed motion audio-video digital data stream, to the provided said prior art, digital signal processor [DSP],

silhouett'ing of a digitally un-compressed, motion audio-video picture, furthermore, the digital signal processor [DSP] then partially executes a provided said, prior art, motion audio-video compression algorithm which has been slightly modified by the methods process of this invention, to use the basic standard's digital compression algorithm towards detecting the first occurring block of 'visually un-important data,' which is also 'non-chang'ing visual data' as described in dependent process claims, furthermore, the 'visually un-important data' and 'non-chang'ing visual data' is subject to 'edit'ing by cut and paste' removed and replaced by digital time-stamp and possible position-stamp digital data, furthermore, with the 'edit'ing by cut and paste' video data subject to storing into a 2-D (row, column) matrix table of: row: starting video frame byte and byte count, and column: cut and paste video

data, which 2-D (row, column) matrix table is appended to the end sequence of impacted motion audio-video video frames,

compress'ing of a digitally un-compressed, motion audio-video picture by use of provided said, prior art, motion audio-video compression algorithms,

video'ing slowly of a digitally un-compressed, still video picture, furthermore, which is a systems process of the provided said, still video production circuit, providing a digitally un-compressed still video digital data stream, to the provided said prior art, digital signal processor [DSP],

silhouett'ing of a digitally un-compressed, still video picture, furthermore, the digital signal processor [DSP] then partially executes a provided said, prior art, still video compression algorithm, which has been slightly modified by the methods process of this invention, to use the basic standard's digital compression algorithm towards detecting the first occurring block of 'visually un-important data,' which is also 'determin'ing of non-changing visual data' as described in dependent process claims, furthermore, the 'visually un-important data' and 'visually important data' is subject to 'edit'ing by 'cut and paste' removed and replaced by digital time-stamp and possible position-stamp digital data, furthermore, with the subject to 'edit'ing by cut and paste' video data subject to storing into a 2-D (row, column) matrix table of: row: starting video frame byte and byte count, and column: cut and

paste video data, which 2-D (row, column) matrix table is appended to the end sequence of impacted still video frames,

compress'ing of a digitally un-compressed, still video picture by use of provided said, prior art, still video digital compression algorithms,

assembl'ing digitally of a hybrid, still video and motion audio-video frame sequence, furthermore, which is the method of using the by now already time-stamped per video frame motion audio-video, to intersperse in the correct timing order, the also by now already time-stamped, still video frames,

transmitt'ing over a provided said LAN to a provided said PC, also connected to the provided said LAN,

dis-assembl'ing digitally of a digital audio-video frame sequence, furthermore, this being the method on the other side of the LAN, of using said 2-D (row, column) matrix table to access the embedded per video frame digital time-stamps, to sort out the incoming hybrid still video and motion audio-video digital frame data,

de-compressing of a incoming hybrid still video and motion audio-video digital frame data, furthermore, uses the provided said prior art still video compression, and also motion audio-video compression, respectively, to digitally de-compress the incoming data,

de-silhouett'ing of an incoming hybrid still video and motion audio-video digital frame data, is using the appended 2-D (row, column) matrix table as defined in previous methods, to reverse 'cut and paste' remove the time-stamp data and also the possible position-stamp data from every video frame in order to 'paste in' the column position's non-changing, background video data,

play'ing of a hybrid still video and motion audio-video digital frame data is using the provided said, PC workstation, to execute standard prior art, digital media by use of commercial PC software,

whereby a hybrid still video picture and moving audio-video picture, combined or hybrid digital compression standard is achieved by the methods of this patent in a front-end security digital camcorder, furthermore, which output new proposed standard hybrid still video and motion audio-video digital compression standard, has plug-in physical memory storage capability, furthermore, the output new proposed standard hybrid still video and motion audio-video digital compression standard is capable of being eventually, processed by a back-end, local area network [LAN], having an attached PC and a PC's permanent memory recording device,

whereby the methods of this invention produces as implemented by a new art, security digital camcorder, outputs, a new art, proposed standard hybrid still video and motion audio-video digital compression standard which can be used by many standard PC based peripherals only

exemplified by slightly modified, prior art, digital compression standards.

97. The process of claim 96, whereby a determin'ing of non-changing data or 'stationary back-ground scenery,' is a sub-process step of silhouett'ing slowly process step, as a slightly modified to a given prior art digital compression algorithm, of a simple bit comparison of the video data between 2 up to integer N count of adjoining video frames.

98. The process of claim 96, whereby a edit'ing by cut and pasting, is a sub-process step of the silhouett'ing slowly process step, as a slightly modified to a given prior art, digital compression algorithm, is the provided said digital signal processor's [DSP's] digital 1 for 1 byte removal of the provided said, prior art digital compression algorithm's already shown 'visually un-important data,' silhouett'ing slowly video data, and replacement with per video frame, digital time-stamp data and possible position-stamp data.

99. The process of claim 96, whereby determin'ing of non-changing data, is a sub-process step of silhouett'ing quickly process step, as slightly modified to a given prior art, digital compression algorithm, is a simple bit comparison of the video data between 2 adjoining video frames.

100. The process of claim 96, whereby edit'ing by cut and pasting, is a sub-process step of silhouett'ing quickly process step, as slightly modified to a given prior art, digital compression algorithm, is said digital signal processor's [DSP's] digital 1 for 1

byte removal of the already shown by provided said prior art, digital compression algorithm, as 'visually un-important,' silhouett'ing quickly video data, and replacement with per video frame, digital time-stamp data and possible position-stamp data.

EOF